87-186-15998

3/88

Operator: **BEACHVIEW RESOURCES LTD.**

GEOPHYSICAL REPORT
ON AN
AIRBORNE VLF-ELECTROMAGNETOMETER
AND MAGNETOMETER SURVEY
KEY CLAIM OMINECA MINING DIVISION
LATITUDE: 57°~~23~~24.7'N LONGITUDE: 127°~~15~~13.5' W
NTS 94E/6E~~6W~~

AUTHORS: E.Trent Pezzot, B.Sc.,
Geophysicist
Vladimir Cukor, P.Eng.,
Geological Engineer

DATE OF WORK: March 9,13,1986
DATE OF REPORT: Feb.17,1987

Owner: Clive Ashworth

GEOLOGICAL BRANCH
ASSESSMENT REPORT

15,998

FILMED

WESTERN GEOPHYSICAL AERO DATA LTD.

TABLE OF CONTENTS **PAGE**

ILLUSTRATIONS

INTRODUCTION

A regional program, totalling over 10,000 line kilometres, of airborne magnetometer and VLF-electromagnetometer surveying was conducted across the Toodoggone Gold Belt area of north central B.C. in early 1986. Western Geophysical Aero Data Ltd. was commissioned by **Beachview Resources Ltd.** to recover and examine that portion of the data which covered the **Key** claim.

One hundred thirteen kilometres of geophysical data was reviewed and analyzed to evaluate this property.

PROPERTY

The **Key** claim, record number 6931, is a 14 unit claim which was recorded on March 25,1985.

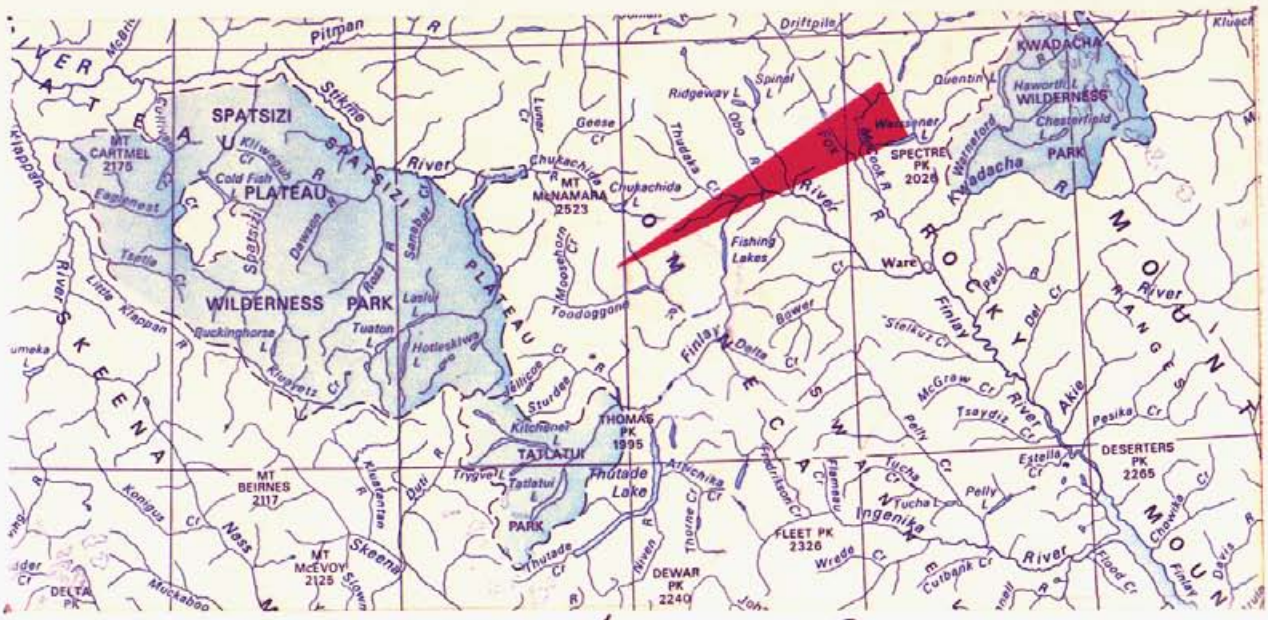
LOCATION AND ACCESS

The claim is located 2 km northeast of Kadah Lake in NTS 94E/6W and 6E and the Omineca Mining Division. The approximate geographical coordinates of the centre of the claim are latitude 57°25'N and longitude 127°15'W (see Figure 1).

Access to the area is normally achieved via fixed wing aircraft from Smithers, B.C. to the Sturdee River airstrip. Historically, a number of helicopter companies have established summer bases at the Sturdee River airstrip and have been available for casual charter to nearby properties.

HISTORY AND PREVIOUS WORK

The Toodoggone area was investigated for placer gold in the 1920's and 1930's. A public company, Two Brothers Valley



BEACHVIEW RESOURSES LTD.

KEY CLAIM

LOCATION AND CLAIMS MAP

Western Geophysical Aero Data Ltd.

FIGURE 1

Gold Mines Ltd., undertook considerable test work, including drilling in 1934. Most of this work was directed towards extensive gravel deposits principally near the junction of McClair Creek and the Toodoggone River.

Gold-silver mineralization was discovered on the Chappelle (Baker Mine) property by Kennco Explorations (Western) Ltd. in 1969. DuPont of Canada Exploration Ltd. acquired the property in 1974 and began production at a milling rate of 90 tonnes per day in 1980.

Numerous other gold-silver discoveries were made in the 1970's and 1980's, including the Lawyers deposit which was discovered by Kennco in 1973 and optioned by SEREM Ltd. in 1979. Work on this property to date has included considerable trenching, drilling and underground development and a feasibility study is currently underway.

Within the belt, three properties show ore reserves: Baker Mine (Du Pont of Canada) 52,000 tonnes 1.07 oz/tonne Au, 23,2 oz/tonne Ag, Lawyers (Serem Inc.) 561,000 tonnes 0.21 oz/tonne Au, 7.1 oz/tonne Ag, Al (Energex Minerals Ltd.) 160,000 tonnes 0.37 oz/tonne Au (subsequently, Lawyers reserves were increased to 1,4000,000 tonnes of unknown grade).

The Toodoggone area has been the scene of intense exploration activity during the past four years with numerous companies exploring over 3,000 mineral claim units. Exploration and development expenditures to 1985 are estimated to be in the order of $33 million.

REGIONAL GEOLOGY

The general geology of the area is shown on Preliminary Map 61, B.C. Ministry of Energy, Mines and Petroleum Resources by L.J.Diakow, A.Panteleyev and T.G.Schroeder, 1985 and on Open File, Geologic Survey of Canada, by H.Gabrielse, C.J.Dodds, J.L.Mansy and G.H.Eisbacher, 1977.

The Toodoggone River area is set within the Intermontaine Belt. Main geologic units comprise of the Upper Cretaceous Sustut Group, the Lower to Middle Jurassic Toodoggone Volcanics, the Upper Triassic Takla Group and Permian carbonate units thought to belong to the Asitka Group. Several intrusive bodies of quartz monzonitic to grano-dioritic composition, irregular in size and shape (belonging to the Omineca Intrusives) intruded the volcano-sedimentary complex in several localities. Swarms of dykes and small stocks are related to these intrusions.

The Asitka group limestones were deposited in a marine environment. The Takla rocks are the product of a volcanic event that may have been accompanied by an uplift of the whole area (possibly changing the environment from submarine to sub-areal). The result is a complex of interlayered volcanic and sedimentary units. This was followed by a period of regression and related deformations. These followed a volcanic episode during which the cyclic Toodoggone Volcanic rocks were formed. The event started with a quartzose acidic extrusion, followed by a mafic extrusion, and then by several intermediate extrusions. Much of the volcanics were porphyritic flows but within each cycle there are pyroclastic units and conglomerates, lahars and sandstones (reworked pyroclastics).

Of the structural elements, the most prominent are three fault zones, trending northwest-southeast, which are

intermittently exposed where outcrop is developed and are clearly outlined by the airborne geophysics. They had a major role not only in distribution of geologic units, but also in the emplacement of minerals. The same, northwest-southeast trend is also the general strike of the majority of the lithostratigraphic members.

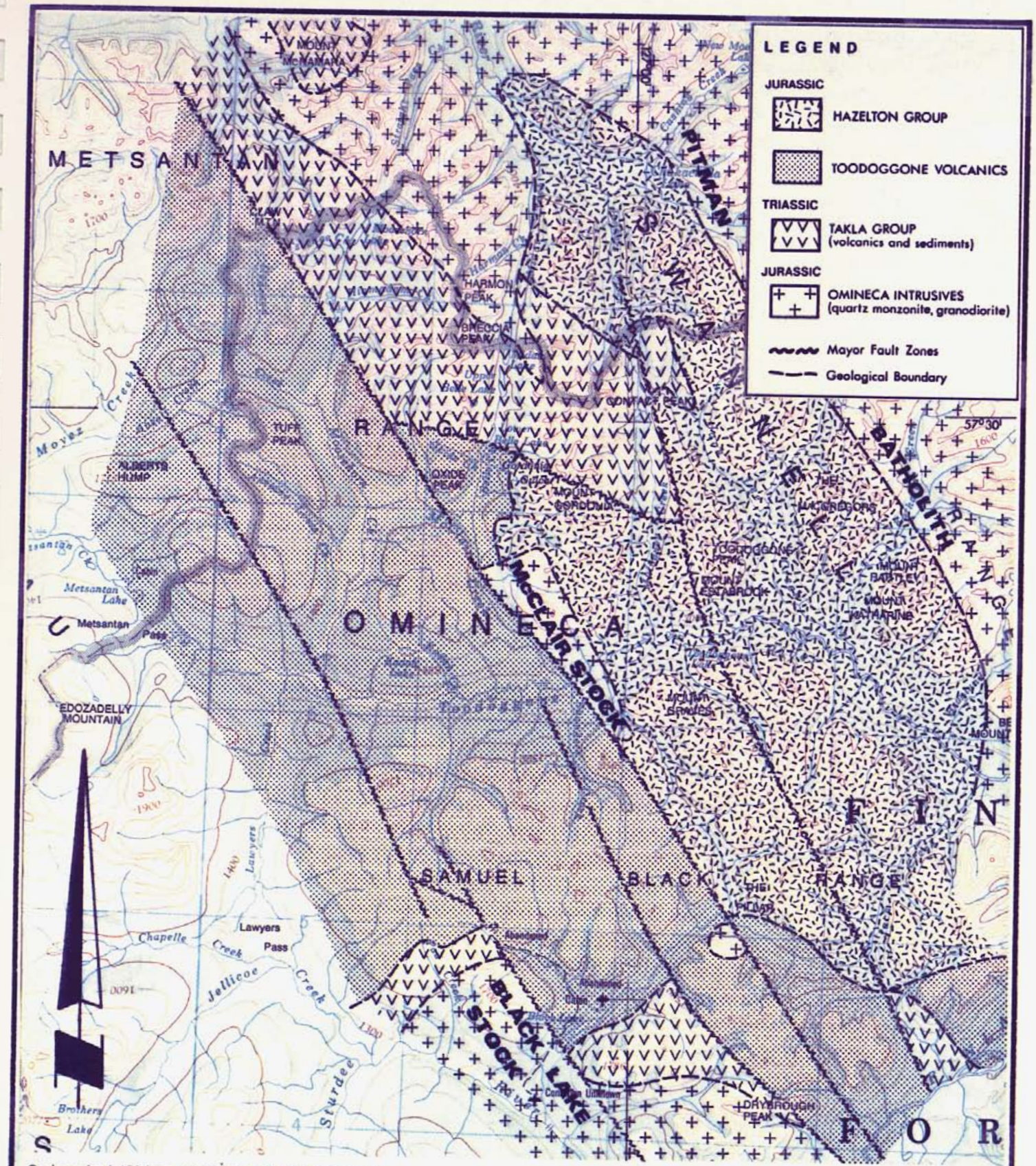
Local uplifts accompanying intrusions resulted in several domal structures, characterized by a circular distribution of volcano-sedimentary units surrounding an intrusive core.

The Toodoggone River area is an important host of numerous precious metal and base metal prospects. Four main mineral deposit types have been identified:

- porphyry - occurring mainly in Takla Group volcanics and Omineca intrusives.
- skarn - contact of limestones (Asitka, and some in Takla) with intrusive.
- stratabound - occurring in Takla limestones interbedded with cherts.
- epithermal - occurring mainly in Toodoggone Volcanics and in Takla rocks.

Of the four, the epithermal type is the most important, and has been subdivided into two subtypes: fissure vein deposits associated with fracture zones and possibly cauldera formations, and hydrothermally altered and mineralized deposits (associated with major fault zones).

Most common ore minerals in epithermal type deposits are argentite, electrum, native gold and silver. Baker Mine and Lawyers Deposit are the two most prominent deposits of this type in the area. For the generalized geology refer to Plate 1A.



Geology after L.J.Diakow, A.Panteleyev and T.G.Schroeter, 1985

Western Geophysical Aero Data Ltd.

GENERALIZED GEOLOGY TOOGGONE RIVER AREA

0 1 5 10 km

PLATE 1a

LOCAL GEOLOGY

The **Key** claim joins, along its' northern border, the extensively explored Energex property, and to the south the Cassidy Resources' claims.

The claim is covered by glacial till, and only sparce outcrop appears on and around the property. Two small outcrops on the claim and outcrops along Moosehorn Creek just south of the claim, belong to tuffs and flows of the Tuff Peak Formation; a subdivision of Toodoggone Volcanics. Although, no intrusive outcrops anywhere near the property area, interpretation of geophysical data infers an intrusive body at depth just south of the claim boundary. This could be possibly, at depth, a continuation of the McClair Stock exposed further east. The intensive block faulting to the northeast of the claim could possibly be interpreted as a result of the uplift during the emplacement of the intrusive, and numerous showings (gold, galena-sphalerite, barite, quartz-pyrite) a result of extensive hydrothermal activity within the roof pendant of the intrusive. A similar pattern is expected to be developed on the property, and masked by the glacial till. Both the magnetic and short electromagnetic anomalies observed support such a theory.

AIRBORNE VLF-ELECTROMAGNETIC AND MAGNETIC SURVEY

This survey simultaneously monitors and records the output signal from a proton precession magnetometer and two VLF-EM receivers installed in a bird designed to be towed 100 feet below a helicopter. A gimbal and shock mounted TV camera, fixed to the helicopter skid, provides input signal to a video cassette recorder allowing for accurate flight path recovery by correlation between the flight path cassette and air photographs of the survey area. A KING KRA-10A radar

LEGEND

QUATERNARY

PLEISTOCENE AND RECENT

UNCONSOLIDATED GLACIAL, FLUVIOGLACIAL, ALLUVIAL AND COLLUVIAL DEPOSITS

CRETACEOUS

UPPER CRETACEOUS

SUSTUT GROUP *(TANGO CREEK FORMATION)*

K — POLYMICTIC CONGLOMERATE, SANDSTONE, SHALE, CARBONACEOUS MUDSTONE

JURASSIC

LOWER AND (?) MIDDLE JURASSIC

"TOODOGGONE VOLCANICS" (?) HAZELTON GROUP

9 — UNDIVIDED, PREDOMINANTLY GREY, GREEN, PURPLE AND ORANGE BROWN HORNBLENDE PLAGIOCLASE AND PLAGIOCLASE PHYRIC ANDESITE PORPHYRY FLOWS, TUFFS, BRECCIA, SOME LAHAR CONGLOMERATE, GREYWACKE, SILTSTONE, RARE RHYOLITE-PERLITE; INCLUDES SOME DYKES AND SILLS

LOWER TO MIDDLE JURASSIC

"TOODOGGONE VOLCANICS" (CARTER, 1972)

GREY DACITE

8 — DARK TO PALE GREY OR GREEN QUARTZOSE BIOTITE HORNBLENDE PLAGIOCLASE ASH FLOWS OF ANDESITIC AND RARELY DACITIC COMPOSITION; VARIABLY WELDED WITH LOCALLY WELL-DEVELOPED COMPACTION LAYERING; CONTAINS ABUNDANT GREY DACITE AND RARE GRANITIC CLASTS; OUTCROPS ARE COMMONLY BLOCKY AND STRONGLY JOINTED — 182 - 8, 183 - 8 Ma (GSC) HORNBLENDE

8A — POLYMICTIC CONGLOMERATE WITH ABUNDANT TAKLA AND GREY DACITE CLASTS IN A QUARTZOSE SANDSTONE MATRIX

8B — GREYWACKE CONGLOMERATE DERIVED ENTIRELY FROM GREY DACITE

TOODOGGONE CRYSTAL ASH TUFFS AND FLOWS

7 — RECESSIVE, GREY, MAUVE, PURPLE QUARTZOSE PLAGIOCLASE CRYSTAL TUFF, LAPILLI TUFF AND BRECCIA, WITH LESSER AGGLOMERATE, LAHAR AND EPICLASTIC BEDS; INCLUDES SOME WELDED TUFFS AND PYROXENE HORNBLENDE FELDSPAR PORPHYRY FLOWS WHICH ARE LOCALLY DOMINANT; SOME MEMBERS CONTAIN NO QUARTZ, PINK WEATHERING WHERE LAUMONTITE IS ABUNDANT — 189 - 6 Ma HORNBLENDE

7A — *EPICLASTIC RED BEDS* — ARKOSIC SANDSTONE, SILTSTONE, CONGLOMERATE AND SLIDE DEBRIS; CONTAINS SOME CRYSTAL TUFF

TUFF PEAK FORMATION

6 — PALE PURPLE, GREY AND GREEN BIOTITE AUGITE HORNBLENDE PLAGIOCLASE PORPHYRY FLOWS; SOME AUTOBRECCIATED FLOWS; MINOR SILLS AND PLUGS; SOME CRYSTAL AND LAPILLI TUFF — 197 - 7 Ma BIOTITE, 200 - 7 Ma HORNBLENDE

6A — CONGLOMERATE OR LAHAR DERIVED FROM UNITS 6 AND 6B, WITH GRADED AND CROSSLAMINATED MUDSTONE AND SANDSTONE INTERBEDS; DEBRIS FLOWS, LAPILLI AND CRYSTAL TUFFS

6B — FLOWS SIMILAR TO UNIT 6 BUT CONTAINING SPARSE ORTHOCLASE MEGACRYSTS

McCLAIR CREEK FORMATION

5 — PURPLE, LAVENDER, GREY, RARELY GREY-GREEN, CROWDED, FINE TO MEDIUM GRAINED PLAGIOCLASE PORPHYRITIC FLOWS; INCLUDES SOME LAPILLI TUFF, BRECCIA AND MINOR EPICLASTIC BEDS

5A — INTRUSIVE DOME WITH AUTOBRECCIATED CARAPACE AND FLANKING BRECCIA

MAFIC FLOW AND TUFF UNIT

4 — *BASALT FLOWS*— THIN BEDDED, PURPLE TO DARK GREEN, COMMONLY EPIDOTIZED, FINE-GRAINED PYROXENE BASALT FLOWS AND TUFFS; INCLUDES SOME SILLS AND DYKES

4A — PURPLE TO MAUVE, MEDIUM-GRAINED PORPHYRITIC BASALT, LOCALLY MAUVE TO PINK, ZEOLITIZED WITH LAUMONTITE; POSSIBLE INTRUSIVE (LACCOLITH)

4B — LAPILLI, CRYSTAL AND ASH TUFF, WELL BEDDED; INCLUDES MINOR THINLY BEDDED SANDSTONE AND RARE CALCAREOUS SILTSTONE (MARL); TOTALLY OR IN PART EQUIVALENT TO UNIT 7

4C — PYROXENE BIOTITE HORNBLENDE PORPHYRY FLOWS WITH TRACES OF QUARTZ AND K-FELDSPAR; INTERBEDDED MINOR BRECCIA AND LAPILLI TUFF; TOTALLY OR IN PART EQUIVALENT TO UNIT 6

JURASSIC *(CONTINUED)*

LOWER TO MIDDLE JURASSIC *(CONTINUED)*

"TOODOGGONE VOLCANICS" (CARTER, 1972) *(CONTINUED)*

LAWYERS—METSANTAN QUARTZOSE ANDESITE

3 — GREEN TO GREY QUARTZOSE PYROXENE (?) BIOTITE HORNBLENDE PLAGIOCLASE PORPHYRY FLOWS AND TUFFS; QUARTZ CONTENT RANGES FROM NEGLIGIBLE TO ABOUT 3 PER CENT IN THE NORTH; FLOWS PREDOMINATE WITH LOCAL FLOW BRECCIA, LAPILLI TUFF AND RARE WELDED TUFF; UNITS TOWARD THE SOUTH ASH FLOWS ARE COMMON, INCLUDING RARE SURGE DEPOSITS; THE UNIT CONTAINS EXTENSIVE ZONES OF EPIDOTIZED, PYRITIC ROCK WITH CHARACTERISTIC SALMON PINK AND ORANGE PLAGIOCLASE CRYSTALS — 168 - 6 Ma HYDROTHERMAL ADULARIA

MOYEZ CREEK VOLCANICLASTICS

2 — CONGLOMERATE WITH SOME GRANITIC CLASTS, GRADED, CROSS-BEDDED GREYWACKE, WELL BEDDED CRYSTAL TUFF, EPICLASTIC SEDIMENTS, LOCAL LAMINATED CALCAREOUS SILT (MARL); RARE THIN LIMESTONE AND CHERT; LOCAL COARSE LANDSLIDE DEBRIS AND LAHAR IN PART OR TOTALLY EQUIVALENT TO UNIT 6A

2A — CRYSTAL TUFFS IN THIN, WELL LAYERED UNITS; SOME EPICLASTIC SANDSTONE AND MUDSTONE; RARE PLANT FRAGMENTS IN SOME BEDS; MINOR LAPILLI TUFF

ADDOOGATCHO CREEK FORMATION

1 — PALE REDDISH GREY TO DARK RED-BROWN QUARTZOSE BIOTITE HORNBLENDE PHYRIC ASH FLOWS; THE ROCKS CONTAIN MINOR SANIDINE AND RARE AUGITE; WELDING IS WIDESPREAD AND RANGES FROM INCIPIENT TO EUTAXITIC; LOCALLY ORANGE TO BROWN VITROPHYRIC CLASTS ARE COMMON; INCLUDES LAPILLI TUFF AND BRECCIA UNITS AS WELL AS MINOR LAYERED GROUND SURGE DEPOSITS — 199 ? 202 - 7 Ma BIOTITE, 200 - 7 Ma HORNBLENDE, 190 - 7 Ma HYDROTHERMAL ALUNITE (WHOLE ROCK), 204 - 7 Ma BIOTITE

1A — CRYSTAL ASH TUFF, LAPILLI TUFF AND RARE AGGLOMERATE WITH INTERSPERSED EPICLASTIC BEDS; TUFFACEOUS SEDIMENTS AND MINOR CONGLOMERATE THAT LOCALLY CONTAINS GRANITIC CLASTS; MINOR HORNBLENDE PLAGIOCLASE PHYRIC FLOWS FORMING SINGLE OR THIN COMPOSITE FLOW UNITS

1B — *QUARTZOSE PLAGIOCLASE PORPHYRY* — JOINTED, DOMAL INTRUSION (?) OF HOMOGENOUS-APPEARING GREY TO GREEN, CHLORITIZED AND EPIDOTE-ALTERED ROCK CONTAINING ABUNDANT INCLUSIONS OF TAKLA VOLCANICS AND RARE METAMORPHIC ROCK CLASTS

TRIASSIC

UPPER TRIASSIC

TAKLA GROUP

T — DARK GREEN AUGITE PORPHYRY BASALT FLOWS AND BRECCIAS WITH LESSER FINE-GRAINED ANDESITE TO BASALT FLOWS AND MINOR INTERBEDDED SILTSTONE, TUFFACEOUS SEDIMENTS AND CHERT; CONTAINS LIMESTONE LENSES THAT MAY BE PART OF THE ASITKA GROUP

PALEOZOIC

PERMIAN

P — **ASITKA GROUP?**

PREDOMINANTLY LIMESTONE (INCLUDING MARBLE AND MINOR SKARN) WITH SOME ARGILLITE, BLACK SHALE AND CHERT UNITS COMPOSED OF LIMESTONE, CHERT, ARGILLITE AND BASALT (Ps c) MAY BE IN PART OR TOTALLY TAKLA GROUP

INTRUSIVE ROCKS

JURASSIC

LOWER JURASSIC (DYKES, SILLS, AND SMALL PLUGS)

A — BASALT

B — AUGITE HORNBLENDE PORPHYRY — BASALTIC STOCK, DOMAL INTRUSION (OR TAKLA INLIER) — 210 - 8 Ma HORNBLENDE

C — BIOTITE HORNBLENDE DIORITE GABBRO

D — PYROXENE PLAGIOCLASE PORPHYRY

LOWER TO MIDDLE JURASSIC (DYKES AND STOCKS)

E — QUARTZ MONZONITE, GRANODIORITE—MEGACRYSTIC IN PART; MINOR SYENITE OR QUARTZOSE SYENITE ALONG CONTACTS

E1 — GRANODIORITE, QUARTZ DIORITE — MEDIUM GRAINED, PORPHYRITIC, FOLIATED IN PART

F — FELDSPAR PORPHYRY HORNBLENDE FELDSPAR PORPHYRY — DYKES AND PLUGS; RARE QUARTZ FELDSPAR PORPHYRY

SYMBOLS

MINERAL OCCURRENCE (MINERAL INVENTORY FILE NUMBER) — × 43

MINERAL PROSPECT (MINERAL INVENTORY FILE NUMBER) — ⚒ 34

EXPLORATION CAMP — ⊖

PLACER WORKINGS

PARK BOUNDARY

ROAD

MAIN OUTCROP AREAS

FAULT (OBSERVED, INFERRED)

THRUST OR REVERSE FAULT (OBSERVED, INFERRED)

GEOLOGIC CONTACT (DEFINED, ASSUMED)

BEDDING, LAYERING, FOLIATION (HORIZONTAL, INCLINED, VERTICAL) — + 10, ⁄

FOLD AXES

FOSSIL LOCALITY (PLANT DEBRIS) — F

RADIOMETRIC DATE SAMPLE SITE, AGE IN Ma — A 104

VOLCANIC VENT

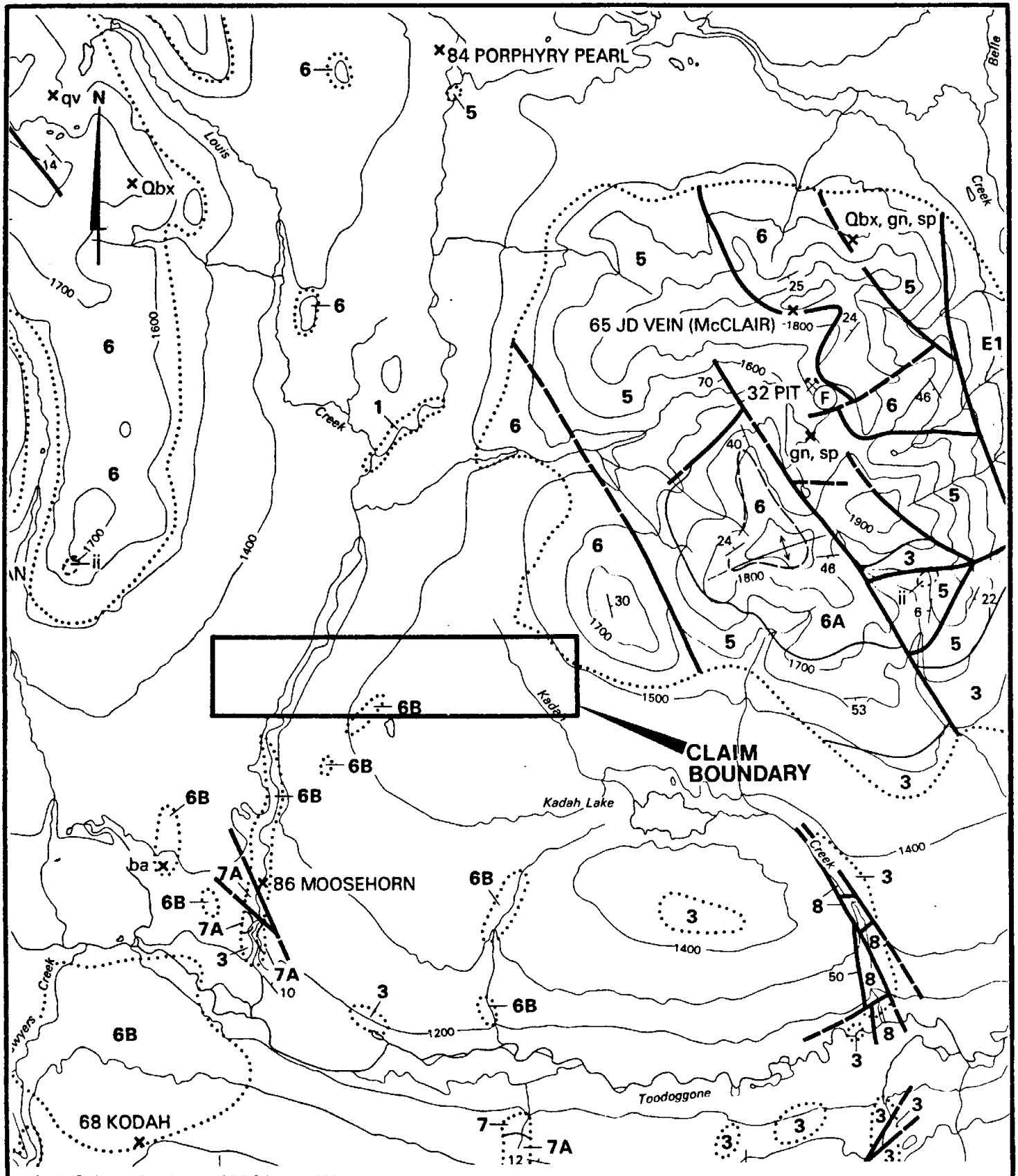
HYDROTHERMAL ALTERATION

FERRICRETE, QUATERNARY FERRUGINOUS BRECCIA — (W)

SILICA, CLAY MINERALS ± ALUNITE, BARITE — (S)

CLAY MINERALS ± ALUNITE, SILICA, HEMATITE — (I)

GOSSAN, LIMONITIC ZONE — (L)



After L.J.Diakow, A.Ponteleyev and T.G.Schroeter, 1985

LOCAL GEOLOGY

500 0 500 1000 2000 meters

Western Geophysical Aero Data Ltd.

PLATE 1b

altimeter allows the pilot to continually monitor and control terrain clearance along any flight path.

Continuous measurements of the earth's total magnetic field intensity and of the total horizontal VLF-EM field strength of two transmission frequencies are stored in three independent modes: an analogue strip chart recorder, digital magnetic tapes and a digital video recovery system. A three-pen analogue power recorder provides direct, unfiltered recordings of the three geophysical instrument output signals. A Hewlett-Packard 9875 tape drive system digitally records all information as it is processed through an onboard micro-computer. The magnetic and electromagnetic data is also processed through the onboard micro-computer, incorporating an analogue to digital converter and a character generator, then superimposed along with the date, real time and terrain clearance upon the actual flight path video recording to allow exact correlation between geophysical data and ground location. The input signals are averaged and updated on the video display every second.

Correlation between the strip chart, digital tape and the video flight path recovery tape is controlled via fiducial marks common to all systems. Line identification, flight direction and pertinent survey information are recorded on the audio track of the video recording tape.

DATA PROCESSING

Field data is digitally recorded, with the time of day fiducial, on magnetic cassettes in a format compatible with the Hewlett-Packard 9845 computer. The recovered flight path locations are digitized and the field data is processed to produce plan maps of each of the parameters. A variety of formats are available in which to display this data.

Total field intensity magnetic information is routinely edited for noise spikes and corrected for any diurnal variations recorded on a base magnetometer located in the survey area.

Total field intensity VLF-EM signals are sensitive to topographic changes and sensor oscillation. Oscillation effects can be reduced by filters tuned to the dominant period. Long period effects attributable to topography can be removed by high pass filtering the planimetric data.

DISCUSSION OF RESULTS

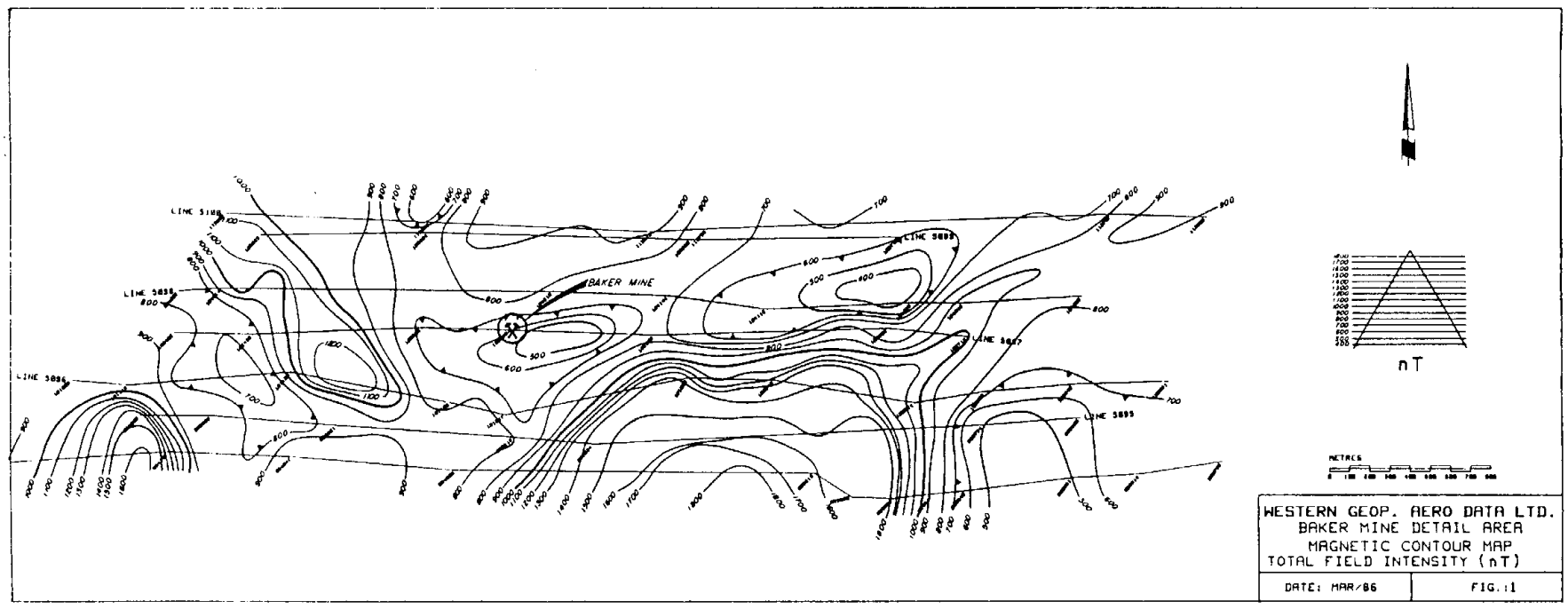
The **Key** claim was surveyed on March 9, and 13,1986. Approximately 113 line kilometres of data has been recovered to examine in detail these claims and the surrounding area. Survey lines were flown east-west on 200 metre centres with data being digitally recorded at one second intervals, providing an average sample spacing of 25 metres. The sensors were towed beneath the helicopter and maintained a terrain clearance of approximately 60 metres. The magnetic data is presented in contour form on an orthophotomosaic base map of the area as Figure 2. The VLF-EM data is presented in profile format as Figures 3 and 4 representing the Seattle and Annapolis frequency information respectively.

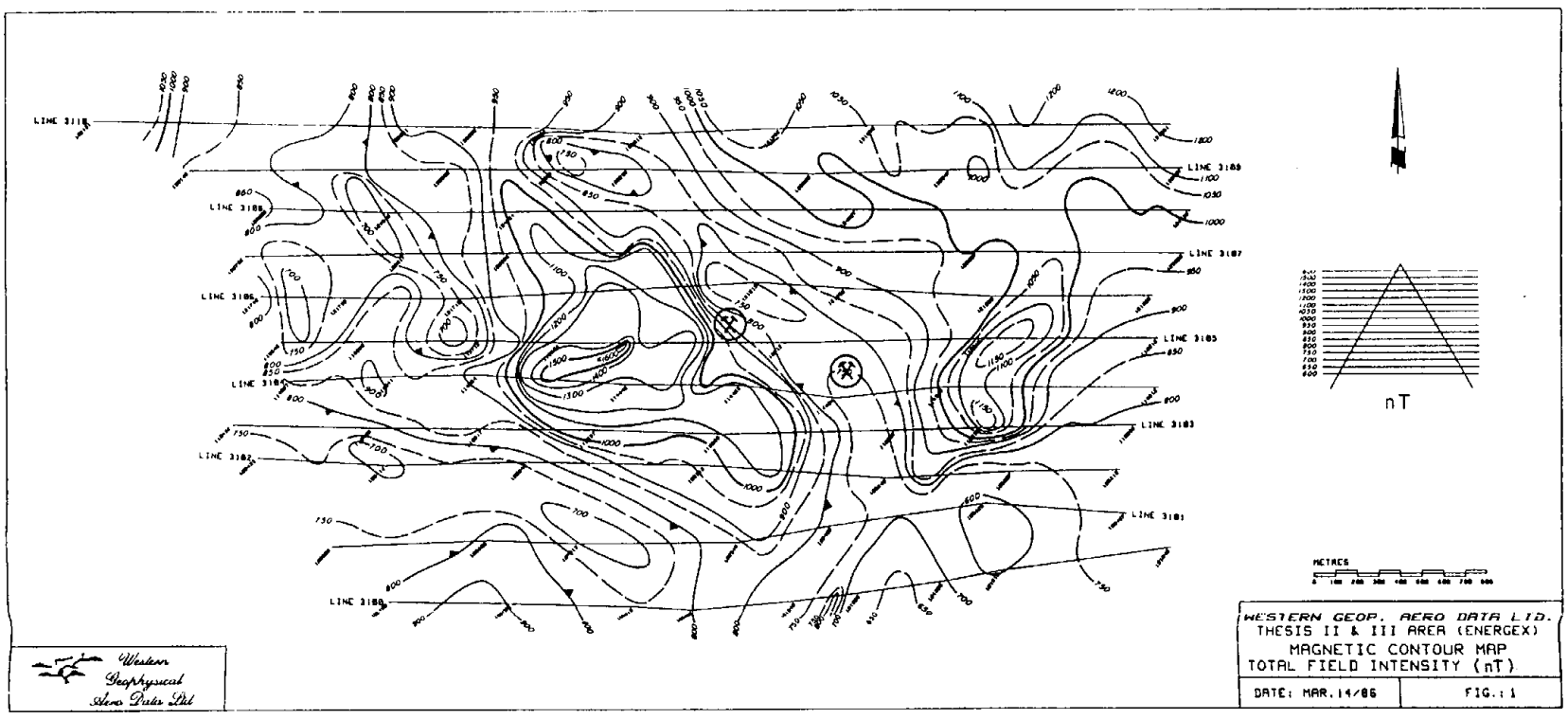
This survey was flown as part of a regional package covering the Toodoggone Gold Belt from the Finlay River in the south to the Chukachida River in the north. Over 10,000 line kilometres of data was gathered to assist the geological mapping of the area as well as to locate specific targets for ground exploration.

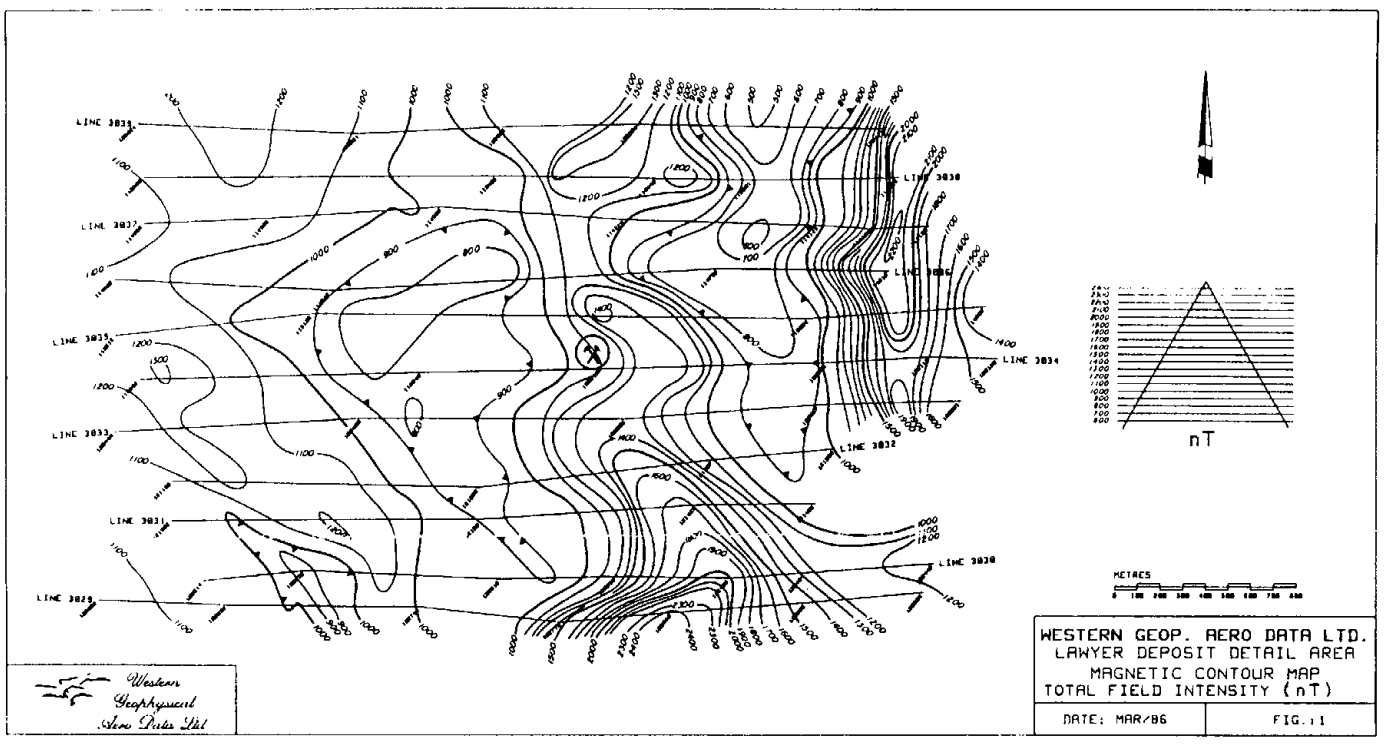
The magnetic data is a useful tool for mapping both regional and local geological structures. Many localized magnetic variations are observed which are attributed to lithological changes.

There are two distinctive magnetic signatures observed which appear consistent across the large survey area. Firstly, Jurassic intrusions appear as magnetic highs; typically with an intensity of greater than 59,300 nT. Secondly, major fault and shear zones appear as linear magnetic lows, generally with intensities of less than 59,000 nT, and often positioned along the flanks of intrusive bodies. The combination of these two signatures are observed across many of the larger epithermal precious metal deposits in the area. Plate 2 of this report illustrates this effect at the Baker Mine, Lawyers and Thesis deposits. The magnetic response is interpreted as reflecting only the general geological environment of these areas and does not map any mineralization directly.

The **Key** claim lies within the Moosehorn Creek valley and is for the most part covered by glacial till. A number of small windows of Tuff Peak Formation rocks, a subdivision of the Toodoggone volcanic series, are mapped by the B.C. Department of Mines in this area. Outcrop is however too sparce to adequately map the lithology and structures of the area.







MAGNETIC RESPONSE EXAMPLES
BASE VALUE 58,000 – nT

Western Geophysical Aero Data Ltd.

PLATE 2

A large magnetic high is mapped to the south of the **Key** claim and is interpreted as reflecting a late Jurassic intrusion. A narrow finger of magnetic high protrudes northwards from the large feature and connects it to three smaller magnetic anomalies. The two smallest anomalies are located on the **Key** claim and the larger feature is located some 500 metres north of the claim boundary. These responses are interpreted as satellites of the major intrusion mapped to the south of the claim.

The background magnetic contours drape around these high anomalies producing a large wedge shaped pattern, narrowing to the north. A northwesterly trending fault is interpreted along the eastern flank of this wedge, crossing the extreme northeast corner of the **Key** claim. Two northeasterly trending faults are also interpreted from the magnetic data as crossing the **Key** claim as delineated on Figure 2.

Elsewhere the magnetic contours reflect the general north-west geological strike prevalent in the Toodoggone Gold Belt area.

The VLF-EM data is presented in profile format on Figures 3 and 4 representing the Seattle and Annapolis frequency respectively. Anomalous responses have been flagged on the appropriate maps and also transferred to Figure 2 for easy comparison to the magnetic data.

Both the Annapolis and Seattle frequency data are very quiet, with anomalous responses being typically 5% above or below local background levels. No regional conductivity lineations were observed. Most of the anomalies observed exhibit a very short strike length, typically less than 400 metres.

These weak VLF-EM anomalies are generated by surface or very near surface conductivity variations. Small overburden inhomogenities or surface drainage systems are the most probable source of these features.

SUMMARY AND CONCLUSIONS

The **Key** claim area was included as part of a regional airborne magnetic and VLF-electromagnetic survey conducted in the Toodoggone Gold Belt area of north central B.C. One hundred thirteen kilometres of this data has been processed and analyzed to evaluate this property.

Two small intrusive plugs are mapped on the **Key** claim. They appear to be outliers or offshoots from a large, late Jurassic intrusion located immediately south of the property. A northwesterly trending fault marks the eastern border of the intrusive activity and two smaller cross faults are evident within the claim boundary.

The VLF-EM responses observed reflect near surface weak conductivity variations. Surface drainage systems and variations in overburden characteristics are the probable source.

RECOMMENDATIONS

The proximity of the **Key** claim to a large Jurassic intrusion and the presence of faulting on the property encourage continued exploration. Efforts should be concentrated in the southeast corner of the **Key** claim in the area of magnetic low values flanking the intrusion and near the major northwesterly trending fault. The magnetic lows flanking the two small intrusions near the centre of the claim, also warrant further investigations.

Geochemical soil analysis for gold, silver and the common sulphide elements is recommended as the next exploration phase. Contingent upon these results, an induced polarization survey may be warranted to identify silicified, high resistivity zones for trenching and drilling targets.

Respectfully submitted,

E. Trent Pezzot, B.Sc.,
Geophysicist

Vladimir Cukor, P.Eng.,
Geological Engineer

COST BREAKDOWN

This report detailing the results of the airborne magnetometer and VLF-electromagnetometer survey and a compilation of geological information was prepared for an all inclusive fee of $8,845.00. This total is based on a cost structure of $35/km for magnetometer data and $15/km for each VLF-EM frequency data set.

113 km	magnetic, VLF-EM (Seattle) and VLF-EM (Annapolis) @ $65/km ...	$7,345.00
113 km	**TOTAL**	**$7,345.00**
	Geological Compilation	700.00
	Interpretation & Report	800.00
	TOTAL	**$8,845.00**
	TOTAL ASSESSMENT VALUE OF THIS REPORT	**$8,845.00**

INSTRUMENT SPECIFICATIONS

BARRINGER AIRBORNE MAGNETOMETER

MODEL:	Nimbin M-123
TYPE:	Proton Precession
RANGE:	20,000 to 100,000 gammas
ACCURACY:	± 1 gamma at 24 V d.c.
SENSITIVITY:	1 gamma throughout range
CYCLE RATES:	
Continuous -	0.6, 0.8, 1.2 and 1.9 seconds
Automatic -	2 seconds to 99 minutes in 1 second steps
Manual -	Pushbutton single cycling at 1.9 seconds
External -	Actuated by a 2.5 to 12 volt pulse longer than 1 millisecond.
OUTPUTS:	
Analogue -	0 to 99 gammas or 0 to 990 gammas - automatic stepping
Visual -	5 digit numeric display directly in gammas
EXTERNAL OUTPUTS:	
Analogue -	2 channels, 0 to 99 gammas or 0 TO 990 gammas at 1 m.a. or 1 volt full scale deflection.
Digital -	BCD 1, 2, 4, 8 code, TTL compatible
SIZE:	Instrument set in console 30 cm X 10 cm X 25 cm
WEIGHT:	3.5 Kg.
POWER REQUIREMENTS:	12 to 30 volts dc, 60 to 200 milliamps maximum.
DETECTOR:	Noise cancelling torroidal coil installed in air foil.

INSTRUMENT SPECIFICATIONS

SABRE AIRBORNE VLF SYSTEM

Source of Primary Field:	-VLF radio stations in the frequency range of 14 KHz to 30 KHz
Type of Measurement:	-Horizontal field strength
Number of Channels:	Two; Seattle, Washington at 24.8 KHz Annapolis, Maryland at 21.4 KHz
Type of Sensor:	-Two ferrite antennae arrays, one for each channel, mounted in magnetometer bird
Output:	-0 - 100 mV displayed on two analogue meters (one for each channel) -recorder output posts mounted on rear of instrument panel
Power Supply:	-Eight alkaline "AA" cells in main instrument case (life 300 hours) -Two 9-volt alkaline transistor batteries in bird (life 300 hours)
Instrument Console:	-Dimensions - 30 cm X 10 cm X 25 cm -Weight - 3.5 Kg

INSTRUMENT SPECIFICATIONS

FLIGHT PATH RECOVERY SYSTEM

i) T.V. Camera:

Model:	RCA TC2055 Vidicon
Power Supply:	12 volt DC
Lens:	variable, selected on basis of expected terrain clearance.
Mounting:	Gimbal and shock mounted in housing, mounted on helicopter skid.

ii) Video Recorder:

Model:	Sony SLO-340
Power Supply:	12 volt DC / 120 volt AC (60Hz)
Tape:	Betamax 1/2" video cassette - optional length.
Dimensions:	30 cm X 13 cm X 35 cm
Weight:	8.8 Kg
Audio Input:	Microphone in - 60 db low impedance microphone
Video Input:	1.0 volt P-P, 75Ω unbalanced, sync negative from camera.

iii) Altimeter:

Model:	KING KRA-10A Radar Altimeter
Power Supply:	27.5 volts DC
Output:	0-25 volt (1 volt /1000 feet) DC signal to analogue meter, 0-10 v (4mv/ft) analogue signal to microprocessor.
Mounting:	fixed to T.V. camera housing, attached to helicopter skid.

INSTRUMENT SPECIFICATIONS

DATA RECORDING SYSTEM

i) Chart Recorder

Type:	Esterline Angus Miniservo III Bench AC Ammeter - Voltmeter Power Recorder.
Model:	MS 413B
Specification:	S-22719, 3-pen servo recorder
Amplifiers:	Three independent isolated DC amplifiers (1 per channel) providing range of acceptable input signals.
Chart:	10 cm calibrated width z-fold chart.
Chart Drive:	Multispeed stepper motor chart drive, Type D850, with speeds of 2,5,10,15,30 and 60 cm/hr. and cm/min.
Controls:	Separate front mounted slide switches for power on-off, chart drive on-off, chart speed cm/hr. - cm/min. Six position chart speed selector individual front zero controls for each channel.
Power Requirements:	115/230 volts AC at 50/60 Hz (Approximately 30 W).
Writing System:	Disposable fibre tipped ink cartridge (variable colors)
Dimensions:	38.6 cm X 16.5 cm X 43.2 cm
Weight:	9.3 kg.

ii) Digital Video Recording System

Type:	L.M. Microcontrols Ltd. Microprocessor Control Data Acquisition System.
Model:	DADG - 68
Power Requirements:	10 - 14 volts DC, Maximum 2 amps.
Input Signal:	3,0 - 100 mvolt DC signals 1,0 - 25 DC signals
Microprocessor:	Motorola MC-6800
CRT Controller:	Motorola MC-6845
Character Generator:	Motorola MCM-6670
Analogue/Digital Convertor:	Intersil 7109
Multiplexer:	Intersil IH 6208
Digital Clock:	National MM 5318 chip 9 volt internal rechargeable nickle-cadmium battery.
Fiducial Generator:	internally variable time set controls relay contact and audio output.
Dimensions:	30 cm X 30 cm X 13 cm
Weight:	3 kg.

iii) Digital Magnetic Tape

Type:	Hewlett Packard cartridge tape unit.
Model:	9875A
Power Requirements:	24 volt d.c.
Data Format:	HP'S Standard Interchange Format (SIF)

Tape Cartridge:	HP 98200A 225K byte cartridge compatible with HP Series 9800 desktop computers.
Tape Drive:	Dual tape drives providing up to 8 hours continual recording time.
Controller:	Internal micro-computer provides 23 built in commands External computer generated commands.

STATEMENT OF QUALIFICATIONS

NAME: PEZZOT, E. Trent

PROFESSION: Geophysicist - Geologist

EDUCATION: University of British Columbia -
B.Sc. - Honors Geophysics and Geology

PROFESSIONAL
ASSOCIATIONS: Society of Exploration Geophysicist

EXPERIENCE: Three years undergraduate work in geology -
Geological Survey of Canada, consultants.

Three years Petroleum Geophysicist,
Senior Grade, Amoco Canada Petroleum Co. Ltd.

Two years consulting geophysicist,
Consulting Geologist - British Columbia,
Alberta, Saskatchewan, N.W.T., Yukon,
Western U.S.A.

Nine years geophysicist with White
Geophysical Inc. and Western Geophysical
Aero Data.

STATEMENT OF QUALIFICATIONS

VLADIMIR CUKOR

I, VLADIMIR CUKOR, of 2830 West 37th Avenue in the City of Vancouver, Province of British Columbia, DO HEREBY CERTIFY that:

1. I am a Consulting Geological Engineer with NVC Engineering Ltd., with business address as above;

2. I graduated from the University of Zagreb, Yugoslavia in 1963 as a Graduated Geological Engineer;

3. I am a Registered Professional Engineer in the Geological Section of the Association of Professional Engineers in the Province of British Columbia, Registration No. 7444;

4. I have practiced my profession as a Geological Engineer for the past 24 years in Europe, North America and South America in engineering geology, hydrogeology and exploration for base metals and precious metals;

5. I have compiled geological data for this report from publicated literature and assessment reports.

REFERENCES

BURGOYNE, Alfred A., 1974 — Geology, Geochemical Soil Survey and EM-16 survey on Gord 1-40 Mineral Claims, Assessment Report 5194.

CARTER, N.C., 1985 — Geological Report on the Joanna I and II Mineral Claims.

DIAKOV, L.J., 1983 — Geology between Toodoggone and Chukachida Rivers, Paper 1984-1.

DIAKOV, L.J., PANTELEYEV, A., SCHROETER, T.G. 1985 — Geology of the Toodoggone River Area, NTS 94E, British Columbia Department of Mines, Preliminary Map 61.

FLOYD, A., MEYER, W., 1973 — Geological, Geochemical & Magnetometer survey - Shas claim group, Assessment Report 4570.

GABRIELSE, H., DODDS, C.J., MAUSY, J.L.,1976 — Geology of the Toodoggone River (94E) Map Area, GSC Open File 306.

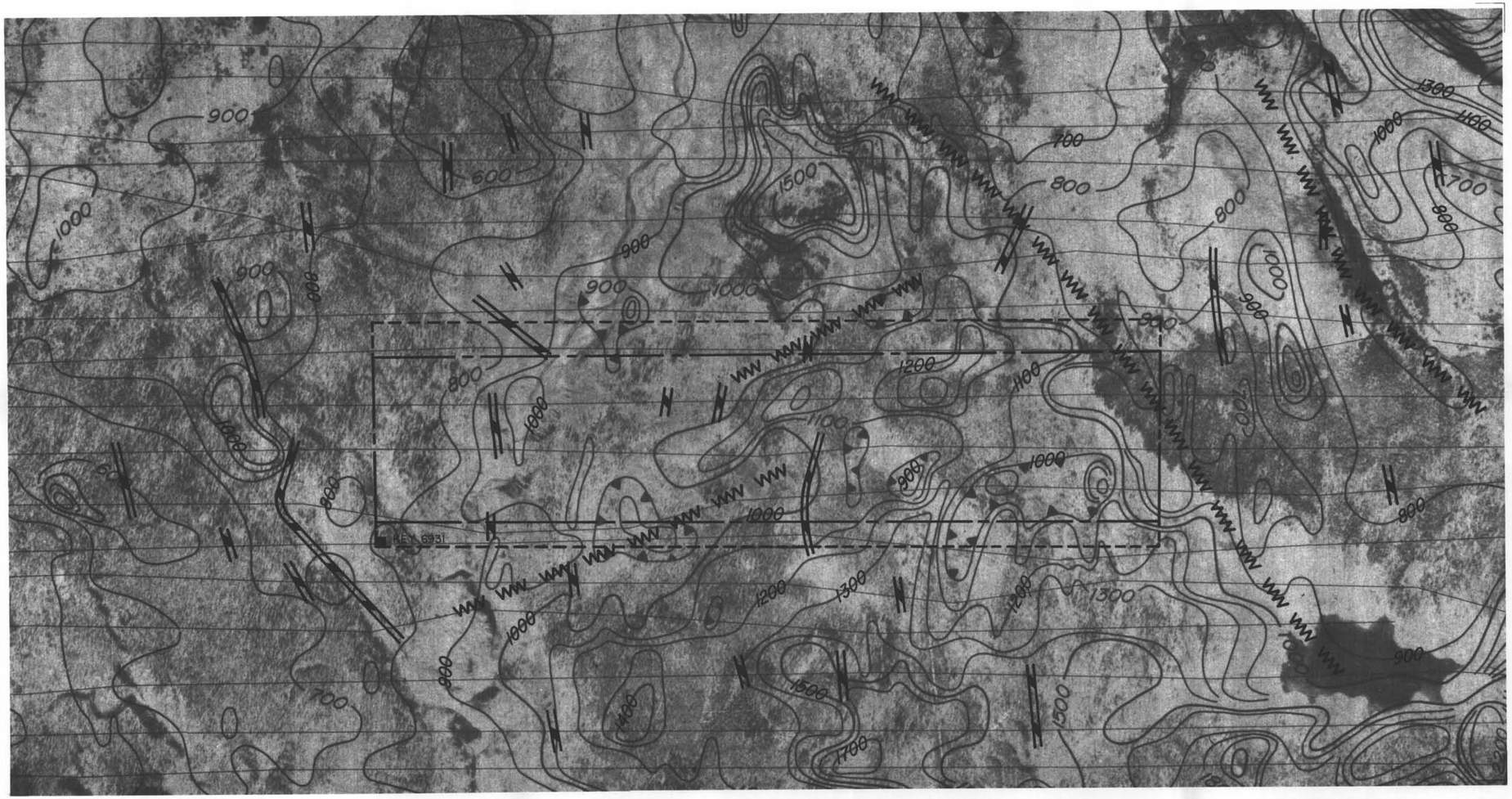
MCLAREN, G., 1984 — Report on the 1984 Diamond Drilling Project; Golden Lion, Golden Lion 2-11 claims, Hump, Hump 2 claims Assessment Report 13,324.

PANTELEYEV, A., 1983 — Geology between Toodoggone and Sturdee Rivers; Paper 1983-1.

SCHROETER, T.G.,1981 — Toodoggone River, Geological Fieldwork 1980, Paper 1981-1

GEOLOGICAL BRANCH
ASSESSMENT REPORT

15,998



KEY

INSTRUMENT: Barringer M-123 Magnetometer

Data corrected for diurnal variations

Base value= 58000 nT

Contour interval= 100 nT

Sensor Elevation = 60 metres

Claim boundary

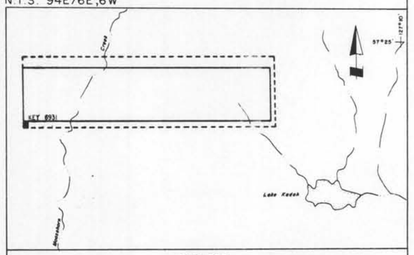
Claim post

Magnetic Low

Inferred Fault

VLF-EM Conductor

N.T.S. 94E/6E,6W



1:82 000
LOCATION MAP

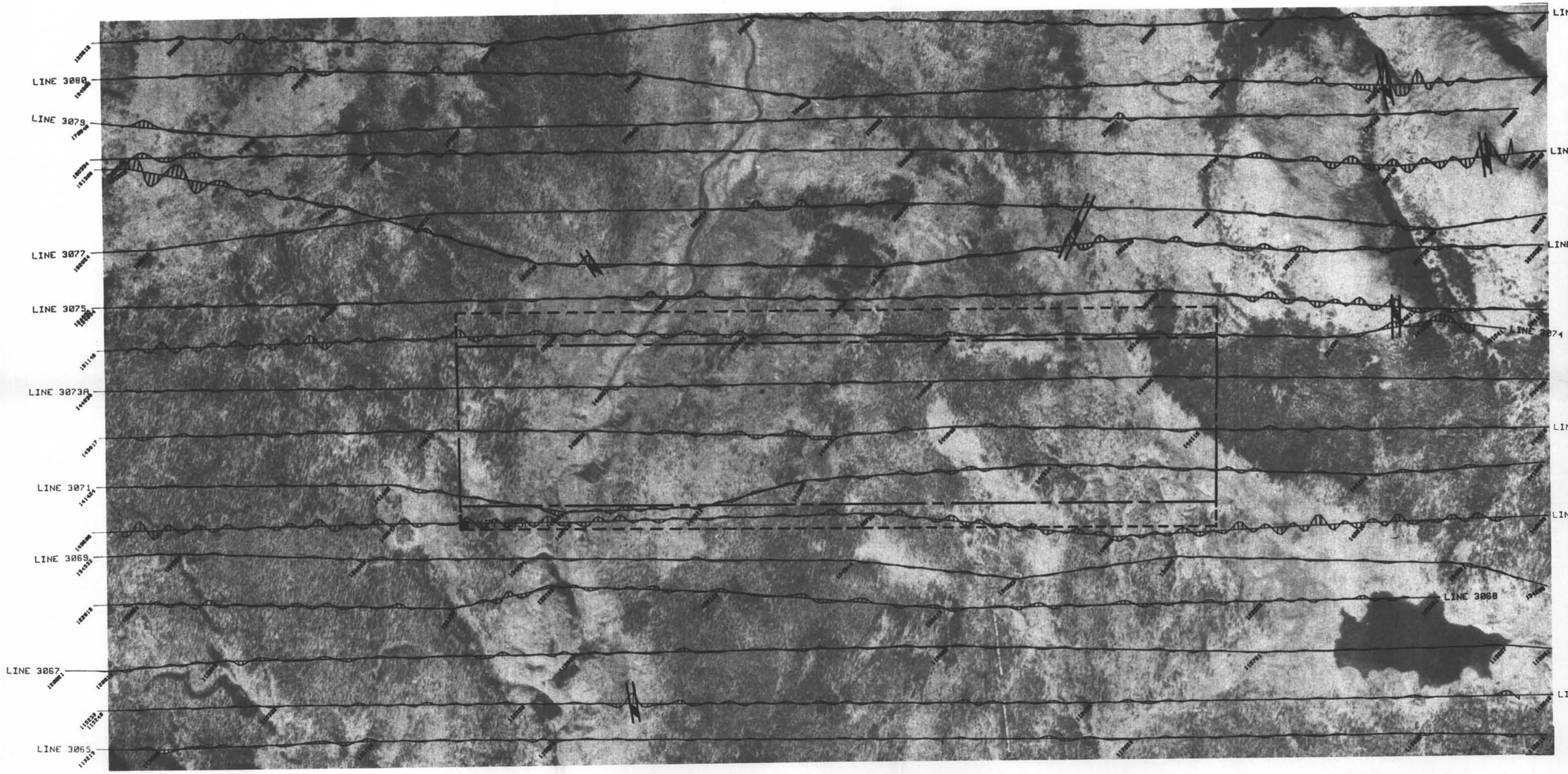
METRES
0 100 200 300 400 500 600 700 800

Western Geophysical Aero Data Ltd.

To accompany the Geophysical Report on the Key Claim

BEACHVIEW RESOURCES LTD.
KEY CLAIM
MAGNETIC CONTOUR MAP
TOTAL FIELD INTENSITY (nT)

DATE: MAR/86 | FIG.: 2



KEY

INSTRUMENT: Sabre Total Field Intensity VLF-EM

Transmitter Station: Seattle, Wa.(24.8 Khz.)

Vertical Scale: 10%/cm.

Sensor Elevation: 60 metres

Claim boundary

Claim post

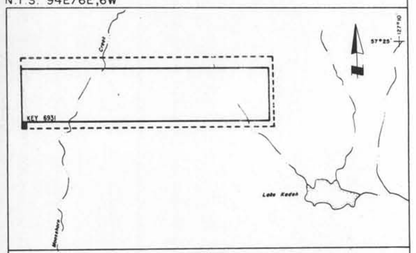
Inferred Fault

VLF-EM Conductor Axis

GEOLOGICAL BRANCH
ASSESSMENT REPORT

15,998

N.T.S. 94E/6E,6W



1:82 000
LOCATION MAP

METRES

0 100 200 300 400 500 600 700 800

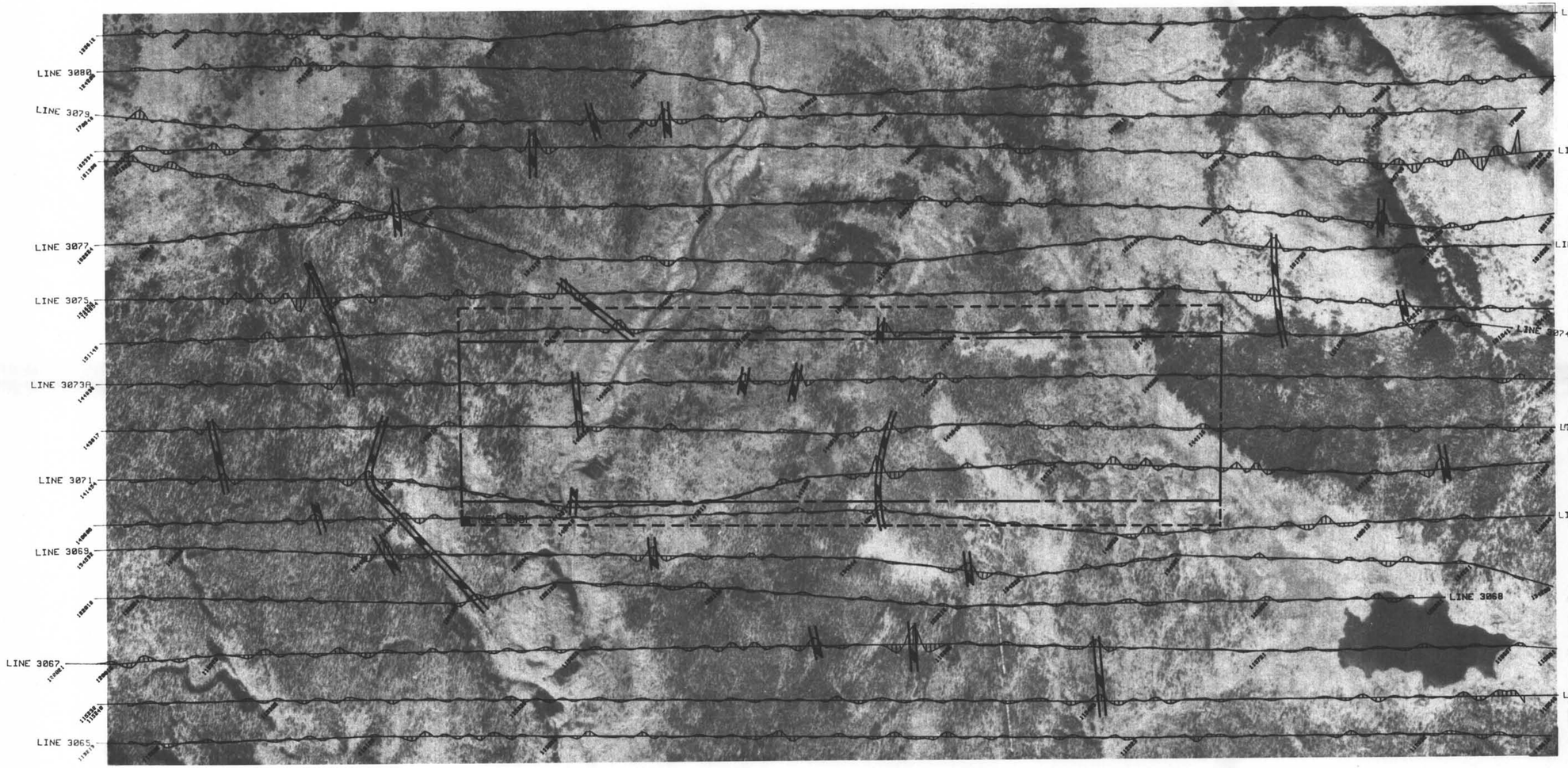
Western Geophysical Aero Data Ltd.

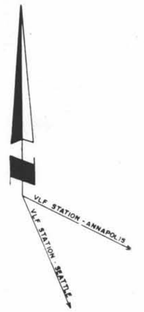
To accompany the Geophysical Report on the Key Claim

BEACHVIEW RESOURCES LTD.
KEY CLAIM
VLF-EM PROFILE MAP (SEATTLE)
TOTAL HORIZONTAL FIELD INTENSITY (%)

DATE: MAR/86

FIG.: 3





KEY

INSTRUMENT: Sabre Total Field Intensity VLF-EM

Transmitter Station: Annapolis, Md.(21.4 Khz.)

Vertical Scale: 10%/cm.

Sensor Elevation: 60 metres

Claim boundary

Claim post

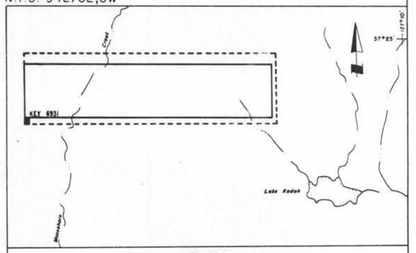
Inferred Fault

VLF-EM Conductor Axis

GEOLOGICAL BRANCH
ASSESSMENT REPORT

15,998

N.T.S. 94E/6E,6W



1:82 000
LOCATION MAP

METRES
0 100 200 300 400 500 600 700 800

Western Geophysical Aero Data Ltd.

To accompany the Geophysical Report on the Key Claim

BEACHVIEW RESOURCES LTD.
KEY CLAIM
VLF-EM PROFILE MAP (ANNAPOLIS)
TOTAL HORIZONTAL FIELD INTENSITY (%)

DATE: MAR/86	FIG.: 4